

ABSTRACT OF THE DISCLOSURE

A pre-filtration apparatus and system using dissolved oxygen ozone-treated water processed through an oxygen saturator having a flow distributor for even distribution of the water. Fully saturating the water with excess oxygen and injecting this high-pressure mixture into a blender have a lower pressure atmosphere to produce a plurality of micro-bubbles known as white-water. Influent water enter the blender through nozzles aligned with the injection of the high-pressure water to blend with the white-water. The blend passes into a hydrocyclone separator from the bottom, spirals up separating waste water from the clean water. Clean water is discharged; waste water is passed to a recovery unit for further processing and recycled. Volatile gas from dissolved toxic chemicals adsorbed by the micro-bubbles is discharged through a carbon filter recovery process.